

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number  
**WO 2005/077431 A1**

(51) International Patent Classification<sup>7</sup>: **A61L 27/50**

(74) Agent: **MURGITROYD & COMPANY**; Scotland House, 165-169 Scotland Street, Glasgow G5 8PL (GB).

(21) International Application Number:  
PCT/GB2005/000471

(22) International Filing Date: 10 February 2005 (10.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0402838.7 10 February 2004 (10.02.2004) GB

(71) Applicant (for all designated States except US): **THE QUEEN'S UNIVERSITY OF BELFAST** [GB/GB]; University Road, Belfast BT7 1NN, Northern Ireland (GB).

(72) Inventor; and

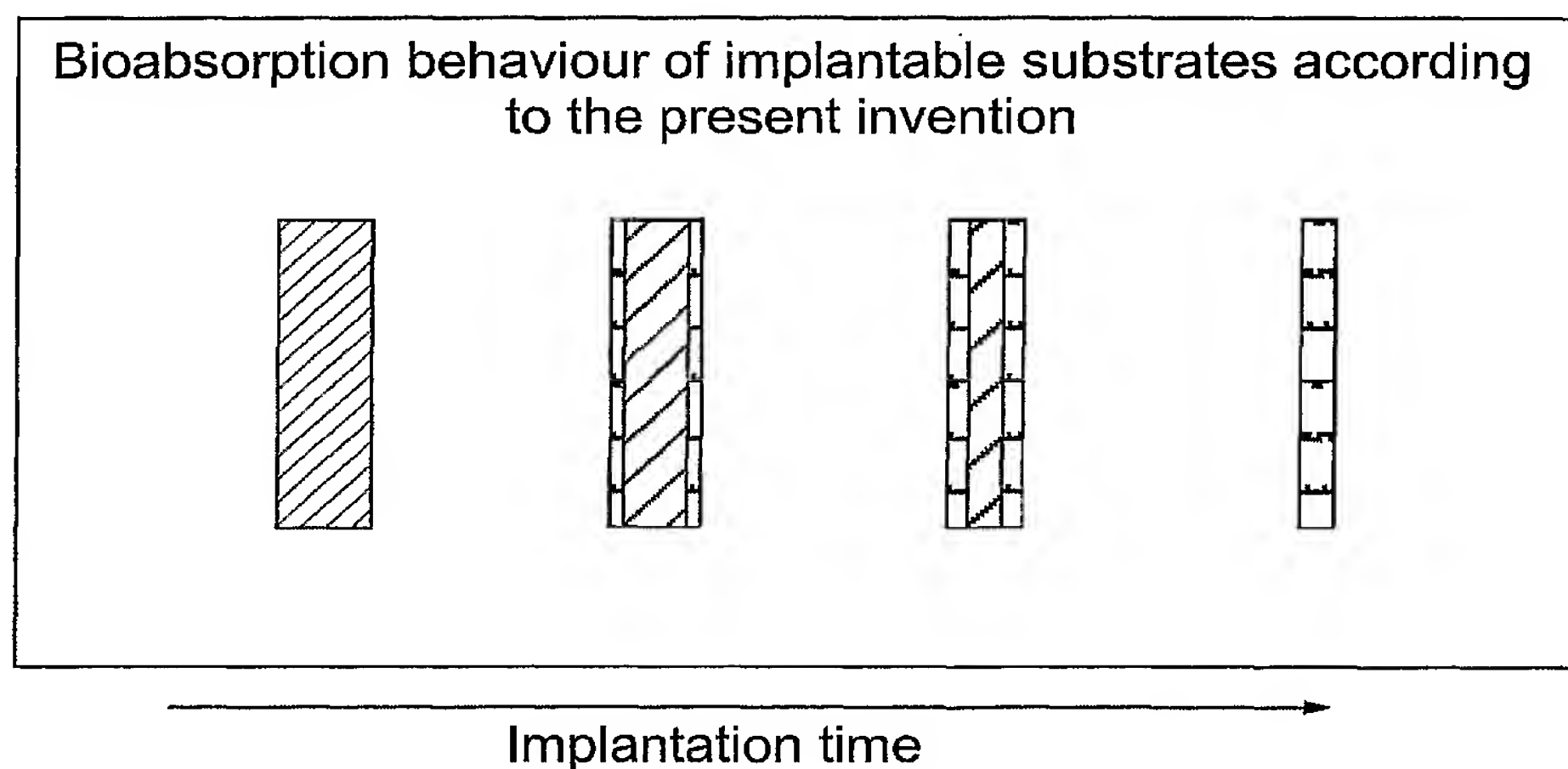
(75) Inventor/Applicant (for US only): **BUCHANAN, Fraser, James** [GB/GB]; 16 Sepon Park, Lisburn, Co. Antrim, Northern Ireland (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: **BIOABSORBABLE IMPLANTABLE SUBSTRATE**



(57) Abstract: There is described a method of producing a bioabsorbable, implantable substrate having a graded molecular weight distribution, comprising exposing at least a portion of an implantable substrate to electron beam irradiation. There is also provided a bioabsorbable implantable substrate comprising a bioabsorbable polymer having a graded molecular weight distribution through at least a portion of its thickness.

WO 2005/077431 A1

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*